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| APPLICATION NO.  | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|--|-------------|----------------------|---------------------|------------------|
| 09/805,482   | 03/13/2001  | Kevin R. Boyle       | PHGB000032          | 3746             |
| 24737  | 7590        | 06/30/2005           | EXAMINER            |                  |
| PHILIPS INTELLECTUAL PROPERTY & STANDARDS<br>P.O. BOX 3001<br>BRIARCLIFF MANOR, NY 10510 |             |                      | WIMER, MICHAEL C    |                  |
|  |             |                      | ART UNIT            | PAPER NUMBER     |
|  |             |                      | 2828                |                  |

DATE MAILED: 06/30/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/805,482

Applicant(s)

BOYLE ET AL.

Examiner

Michael C. Wimer

Art Unit

2828

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 13 May 2005.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-11 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-11 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### *Claim Rejections - 35 USC § 103*

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1,3 and 5-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Erkocevic (6222494) in view of Woloszczuk (4983987).

Regarding Claims 1,3 and 5-11, Erkocevic shows in Fig. 4, an antenna arrangement for a wireless device (e.g., WLAN) comprising at least one ground element 22,24 connected to ground in the device, and antenna arrangement 14,31 and 32, where at least antenna 32 has a length of one half wavelength. It would have been obvious to the skilled artisan that the electrical wavelength of the antenna 32 is selected so that the ground currents are substantially minimized, wherein any radiator over a half wavelength produces less ground current than the quarter wavelength radiator. The antenna is made of antenna elements and intended to be in a vertical position atop the radio housing. At least ground element 26 (Figures 1 and 2) provides a ground plate, although not of any particular and significant wavelength dimension. This portion of ground is perpendicular to the vertical portions of the antenna and thus forms a plane and surrounds the extent of the vertical radiator, as claimed. The transmission lines and antenna are formed on a printed circuit board and thus do not protrude

therefrom, as recited in Claim 1. Thus, Woloszczuk is cited as evidence of obviousness and as resolving the level of ordinary skill in the antenna art and shows a common triplate construction for the transmission lines, comprised of etched conductors 14,15 on printed circuit boards, and having antenna elements 6,7,10,11 protruding from the pcb's, and phased according to the network arrangement employed. The ground plane 21 behind the radiators limits currents, and the projection thereof "surrounds" the extents of all antenna elements in the array formed therein. It would have been obvious to the skilled artisan to employ such protruding antenna elements of Woloszczuk in lieu of the etched conductors in Erkocevic for the purpose of providing.

3. Claims 2 and 4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Erkocevic (6222494) in view of Woloszczuk (4983987) as applied to claims 1,3 and 5-11 above, and further in view of Davidson (6008765).

Regarding Claims 2 and 4, the antenna in Erkocevic is linear and does not appear to be shortened (via loading, etc.). Thus, Davidson et al are cited as resolving the level of ordinary skill in the antenna art and teach a loaded, helical antenna that is electrically shortened, and provides a ground plane 23, surrounding the vertical antenna 7,12. It would have been obvious to the skilled artisan to employ the ground plane and helical, or electrically-loaded antenna of Davidson et al. in lieu of any antenna element in Erkocevic/Woloszczuk for the purpose of providing a shortened antenna greater than a half wavelength in order to effect efficiency and the radiation pattern.

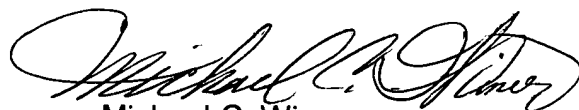
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4. The patent to Guy (4823144) is cited as of interest showing typical triplate construction for edge mounted dipoles.

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael C. Wimer whose telephone number is (571) 272-1833. The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Minsun O. Harvey can be reached on (571) 272-1835. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Michael C. Wimer  
Primary Examiner  
Art Unit 2828

MCW  
6/15/2005